Safety Data Sheet

SANONDA
(AUSTRALIA) PTY LTD

Infosafe	Issue Date :August 2015	ISSUED by SANONDA

Product Name **SANONDA PARAQUAT/DIQUAT HERBICIDE**

Classified as hazardous

1. Identification

GHS Product Identifier	Sanonda Paraquat/Diquat Herbicide
Product Code	7096
Product Type	Group L Herbicide
Company Name	Sanonda (Australia) Pty Ltd (ABN 23 059 813 973)
Address	Suite 822, St Kilda Road Towers, No. 1 Queens Road, Melbourne, Victoria 3004 Australia
Telephone/Fax Number	Tel: +61 3 9863 8081 Fax: +61 3 9863 8083
Emergency phone number	+61 3 9863 8081
Recommended use of the chemical and restrictions on use	Water soluble herbicide for non-selective control of many annual and perennial weeds. Can be utilised in crop establishment programs. Contains non-ionic wetter. FOR USE ONLY AS AN AGRICULTURAL HERBICIDE. DO NOT USE THIS PRODUCT IN THE HOME GARDEN.
Other Information	This Safety Data Sheet describes, to the best of our knowledge, the properties of the concentrated product. The physical properties and some of the assessments do not apply to the properties of the product once it has been diluted for application. Acute health effects of the diluted product are likely to be much less severe.

2. Hazard Identification

GHS classification of the substance/mixture	OT3 Acute Toxicity - Oral: Category 3 DT3 Acute Toxicity - Dermal: Category 3 SC-2 Skin Corrosion/Irritation: Category 2 GT/VT/IT 2 Acute Toxicity - Inhalation: Category 2 SE-3RES STOT Single Exposure Category 3 (respiratory tract irritation) RE1 STOT Repeated Exposure Category 1 ED1 Eye Damage/Irritation: Category 1
Signal Word (s)	DANGER
Hazard Statement (s)	H301 Toxic if swallowed. H311 Toxic in contact with skin. H315 Causes skin irritation. H330 Fatal if inhaled. H335 May cause respiratory irritation. H372 Causes damage to organs through prolonged or repeated exposure. H318 Causes serious eye damage.
General Precautionary	P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children. P104 Read Safety Data Sheet before use.
Pictogram (s)	Corrosion, Exclamation mark, Health hazard, Skull and crossbones

Precautionary statement – Prevention	P260 Do not breathe dust or spray. P264 Wash hands and exposed skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P280 Wear protective gloves, clothing, eye and face protection. P272 Contaminated work clothing should not be allowed out of the workplace.
Precautionary statement – Response	P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P310 Immediately call a POISON CENTER or doctor/physician.

P320 Specific treatment is urgent (see First Aid information on this SDS).
P301 IF SWALLOWED:
P315 Get immediate medical advice/attention.
P320 Specific treatment is urgent (see First Aid information on this SDS).
P330 Rinse mouth.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P315 Get immediate medical advice/attention.
P322 Specific measures (see First Aid information on this SDS).
P361 Remove/Take off immediately all contaminated clothing.
P363 Wash contaminated clothing before reuse.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P315 Get immediate medical advice/attention.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

Other Information Poisons Schedule S7 DANGEROUS POISON

3. Composition/information on ingredients

Chemical Characterization Liquid

Ingredients

Name	CAS	Concentration,%
Paraquat dichloride	1910-42-5	115
Diquat dibromide	85-00-7	135
other non-hazadous ingredients	--	5-10
Water	7732-18-5	to 100

4. First-aid measures

Inhalation Remove patient from exposure, keep warm and at rest.
Obtain medical attention urgently.

Ingestion RAPID TREATMENT IS ESSENTIAL IN CASE OF PARAQUAT POISONING.
Immediately transfer patient to nearest hospital or medical centre, warning by telephone of the estimated time of arrival so that the start of treatment is not delayed. If swallowed, do NOT induce vomiting; make every effort to prevent vomit from entering the lungs by careful placement of the patient. Rinse mouth. A slurry of activated charcoal or clay (fuller's earth, bentonite) may be administered by a trained person. Ingestion of activated charcoal tablets, food, or even plain dirt, may be of benefit if absorbent slurry cannot be given.

Skin Wash affected areas thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
Seek medical advice, but only after the exposed skin has been thoroughly washed.

Eye contact If in eyes, hold eyelids open and wash with copious amounts of water for at least 15 minutes.
Seek medical advice immediately.

First Aid Facilities If poisoning occurs, contact a doctor or the Poisons Information Centre (Australia) on 13 11 26.

Advice to Doctor RAPID TREATMENT FOR PARAQUAT POISONING IS ESSENTIAL. Evacuation of the stomach, stomach washout and administration of adsorbents should be carried out as quickly as possible.
A booklet entitled 'Paraquat Poisoning, a practical guide to diagnosis, first aid and hospital treatment' (prepared by Syngenta) is available at major hospitals or Poisons Information Centres, or contact the emergency number at the end of this SDS.
TREATMENT: Wash out stomach and test urine and gastric aspirate (if clear) for presence of paraquat. Give activated charcoal (100 g for adults or 2 g / kg body weight for children) orally or via gastric tube, together with a suitable purgative (200 ml of an aqueous solution of mannitol). Alternatively, 1 litre of 15% aqueous suspension of Fuller's Earth or a 7% suspension of bentonite in 10% glycerol in water should be used if activated charcoal is unavailable. Repeat administration of adsorbent plus purgative until adsorbent is seen in the stools. This should normally take between 4 and 6 hours after the start of treatment. NOTE: The use of gastric lavage without administration of an

Indication of immediate medical attention and special treatment needed if necessary	adsorbent has not shown any clinical benefit. Do not use supplemental oxygen. Treat skin irritation / damage symptomatically with daily review if contaminated with concentrate as blistering and chemical burns may develop over 1 to 3 days. If systemic toxicity is suspected, test for paraquat in urine or blood and treat confirmed paraquat systemic toxicity as above. OBTAIN IMMEDIATE MEDICAL ATTENTION. SPEED IS ESSENTIAL.

5. Fire-fighting measures

Suitable extinguishing media	If involved in a fire, the product will not burn. Choose extinguishing media to suit the burning material.
Hazards from Combustion Products	Non-combustible. If involved in a fire, the dehydrated components may emit oxides of carbon, oxides of nitrogen and hydrogen chloride.
Special Protective Equipment for fire fighters	Breathable air apparatus must be worn when fighting a fire in which this product is involved.
Hazchem Code	2X
Other Information	STOP FIRE WATER FROM ENTERING DRAINS OR WATER BODIES.

6. Accidental release measures

Spills & Disposal	Contain spill and absorb with clay, sand, soil or proprietary absorbent (such as vermiculite). Collect spilled material and waste in sealable open-top type containers for disposal. On-site disposal of concentrate is not acceptable. If possible, ring 1800 033 498 for specialist advice.
Personal Protection	Wear specified PPE to decontaminate personnel and equipment, or to handle broken packages or containers. Wear eye protection, chemically resistant gloves, rubber boots, chemically resistant overalls and full face shield with chin guard. Decontaminate emergency personnel with soap and water before leaving the emergency area.
Clean-up Methods - Large Spillages	If large liquid spills occur, attempt to recover as much spilt material from sumps and bunded areas, as possible, before absorbing remaining material into vermiculite or other absorbent.
Environmental Precautions	Use earthen bunds or absorbent bunding to prevent spreading of spillage.

7. Handling and storage

Precautions for Safe Handling	For use by licensed pest control operators or primary producers only. Do not work in spray mist. Avoid contact of the concentrate with skin cuts or abrasions. Do not continue to use if skin irritation or nose bleed occurs. This may be caused by exposure to spray mist as the result of incorrect use of equipment or adverse climatic conditions. Stop and review handling and spraying techniques before further spraying. If symptoms persist seek medical advice.
Conditions for safe storage, including any incompatabilities	Store in the closed, original container in a cool, well ventilated area. Do not store for prolonged periods in direct sunlight. Store in a locked enclosure. For use by licensed pest-control operators or primary producers only.
Other Information	Always read the label and any attached leaflet before us

8. Exposure controls/personal protection

Occupational exposure limit values	No exposure standard for this product has been set, however, an exposure standard has been set for paraquat (respirable sizes) at 0.1 mg/m3. An exposure standard has been set for diquat dibromide at 0.5 mg/m3.
Appropriate engineering controls	No special requirements. Ensure workplace is well ventilated.

Respiratory Protection	Some people who are extremely sensitive to the product may develop nose bleeds when handling the concentrate. If possible, these people should not handle the material; if they must, provide effective local ventilation. If exposure to vapour, spray or dusts from dried product is expected, wear a high efficiency particulate respirator covering nose and mouth.
Personal Protective Equipment	When opening the container, preparing spray and using the prepared spray wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves and goggles. When there is a risk of exposure to spray mist wear waterproof footwear and waterproof protective clothing, impervious gauntlet length gloves (rubber or PVC), goggles and a face mask and respirator covering nose and mouth and capable of filtering spray droplets. A high efficiency type particulate respirator is recommended, but in any event use a respirator which complies with the requirements of AS1716 (Standards Association of Australia). Further advice on safety equipment should be obtained from a safety equipment manufacturer. Avoid contacting vegetation wet with spray, but if necesary to do so, wear waterproof footwear and waterproof protective clothing and gloves.
Hygiene Measures	After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash contaminated clothing and safety equipment.
Requirements Concerning Special Training	Check State or Territory regulations that require people who use pesticides in their job or business to have training in the application of the materials.

9. Physical and chemical properties

Form	Liquid
Appearance	Clear dark blue liquid
Odour	Obnoxious odour
Boiling Point	~100°C at 100kPa
Solubility in Water	Soluble in water.
Specific Gravity	1.17 at 20°C
pH	5.0 - 6.5 (1% in water)
Vapour Pressure	2.37 kPa at 20°C (water vapour pressure)
Partition Coefficient: n-octanol/water	Kow Log P is -4.5 (@ 20°C for paraquat); -4.6 (diquat)
Flammability	Non combustible material.

10. Stability and reactivity

Chemical Stability	Paraquat and diquat are inactivated by adsorption onto clay.
Incompatible Materials	Paraquat and diquat are highly corrosive to most metals, e.g. aluminium, zinc and iron.
Possibility of hazardous reactions	Keep away from strong oxidising agents.

11. Toxicological Information

Acute Toxicity-Oral	Paraquat Dichloride: Oral LD50: Rat 157mg/kg; Oral LD50: Mouse = 104mg/kg Oral LD50: Guinea Pig = 22-42mg/kg; Oral LD50: Dog = 25-50mg/kg Diquat dibromide: Oral LD50: rat = 408 mg/kg

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Acute Toxicity-Dermal	Paraquat Dichloride: Dermal LD50: Rat = 236-500mg/kg Diquat dibromide: Dermal LD50: Rat >793 mg/kg
Acute toxicity - Inhalation	LC50 (rat) (4hr) 0.5 - 1.5 µg/l for paraquat dichloride LC50 (rat) (4hr) 571 - 673 µg/l for diquat dibromide
Ingestion	Short term exposure: Significant oral exposure is considered to be unlikely. Available data shows that this product is toxic, see symptoms above.
Inhalation	Short term exposure: Significant inhalation exposure is considered to be unlikely. Nose bleedingand soreness of the throat may result from spray mist or dust trapped on the nasal mucosa. Irritating to the respiratory system. Pulmonary oedema may occur up to 48 hours after exposure and could prove fatal. This product contains pyridine to give an offensive smell. This has been done to reduce the likelihood of accidental ingestion. Pyridine may cause headaches and nausea in some people when inhaled. The presence of this offensive smell in the air does not necessarily indicate the presence of paraquat.
Skin	Short term exposure: Available data shows that this product is toxic, but further symptoms are notavailable. In addition product is a skin irritant. Symptoms may include itchiness and reddening of contacted skin. Other symptoms may also become evident, but all should disappear once exposure has ceased. Contamination of nails may cause white spots; possible nail cracking or even loss in severe cases.
Eye	Short term exposure: Exposure via eyes is considered to be unlikely. This product is a severe eyeirritant. Symptoms may include stinging and reddening of eyes and watering which may become copious. Other symptoms such as swelling of eyelids and blurred vision may also become evident. If exposure is brief, symptoms should disappear once exposure has ceased. However, lengthy exposure or delayed treatment is likely to cause permanent damage.
Skin Sensitisation	Product is not a skin sensitiser.
Carcinogenicity	Data indicates no carcinogenic effects.
Reproductive Toxicity	Data indicates no carcinogenic effects.
Chronic Effects	Based on available data, repeated exposures are not anticipated to cause additional significant adverse effects.
Serious eye damage/irritation	This product is a severe eye irritant.
Respiratory Irritation	The product is a moderate respiratory irritant.
Skin Corrosion/irritation	Moderate skin irritant.
Other Information	The Australian Acceptable Daily Intake (ADI) for paraquat (as cation) for a human is 0.004 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 0.45 mg/kg/day, the level determined to show no effects during long term exposure for the most sensitive indicators and the most sensitive species. (Ref: Comm. Dept. of Health and Ageing, Office of Chemical Safety, 'ADI List', September 2013). ADI for diquat is 0.002 mg/kg/day, NOEL 0.2 mg/kg/day.

12. Ecological information

Persistence and degradability	Paraquat and diquat are rapidly absorbed and inactivated by contact with soil. There is evidence of photodegradation in air.
Known Harmful Effects on the Environment	The product is a marine pollutant for sea transport.
Acute Toxicity - Fish	LC50 (96hr) for rainbow trout is 15 mg/l for paraquat dichloride LC50 (96hr) for rainbow trout is 39.2 mg/l for diquat dibromide
Acute Toxicity -Daphnia	EC50 (48hr) for daphnia is 1.2 mg/l for paraquat dichloride. EC50 (48hr) for daphnia is 2.2 mg/l for diquat dibromide.
Acute Toxicity - Algae	EC50 (72hr) for algae 0.32 mg/l for paraquat. EC50 (72hr) for algae >0.021 mg/l for diquat.
Acute Toxicity - Other Organisms	The following data is for the active ingredient, paraquat dichloride. LD50 for mallard duck is 199 mg/kg LD50 for bobwhite quail is 175 mg/kg Bees: Not toxic to bees. LD50 36 µg/bee. LD50 for mallard duck is 155 mg/kg for diquat

13. Disposal considerations

Product Disposal	On site disposal of the concentrated product is not acceptable. Ideally, the product should be used for its intended purpose. If there is aneed to dispose of the product, approach local authorities who hold periodic collections of unwanted chemicals (ChemClear®).
Container Disposal	Do not use this container for any other purpose. Triple or preferably pressure rinse containers before disposal. Add rinsings to the spray tank. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, puncture or shred and bury containers in local authority landfill. If no landfill is available, bury the containers below 500mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt. Returnable containers: empty contents fully into application equipment. Replace cap, close all valves and return to the point of supply for refill or storage. drumMUSTER is the national program for the collection and recycling of empty, cleaned, non returnable crop production and on-farm animal health chemical containers. If the label on your container carries the drumMUSTER symbol, triple rinse the container, ring your local Council, and offer the container for collection in the program.

14. Transport information

U.N. Number	3016
UN proper shipping name	BIPYRIDILIUM PESTICIDE, LIQUID, TOXIC - (Contains Paraquat and diquat)
Transport hazard class(es)	6.1
Hazchem Code	2X
Packaging Method	3.8.6.1
Packing Group	III
Storage and Transport	Considered dangerous for transport by the Australian Code for the Transport of Dangerous Goods by Road and Rail.
EPG Number	6B1
IERG Number	34
UN Number (Sea Transport)	3016
IMO Class/Packing Group	Class 6.1; Packing Group III
IMO Marine Pollutant	Marine Pollutant
IMO Proper Shipping Name	BIPYRIDILIUM PESTICIDES, LIQUID, TOXIC, N.O.S. (contains paraquat and diquat)

15. Regulatory information

Poisons Schedule	S7
Packaging & Labelling	DANGEROUS POISON KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING CAN KILL IF SWALLOWED DO NOT PUT IN DRINK BOTTLES KEEP LOCKED UP
Other information	This product is registered with the Australian Pesticides and Veterinary Medicines Authority (APVMA). APVMA product number: 62495.

16. Other Information

Date of preparation or last revision of SDS	Issued 28/08/2015 This SDS replaces document dated May 2011.
Contact Person/Point	Sanonda (Australia) Pty Ltd Suite 822, St Kilda Road Towers, No. 1 Queens Road, Melbourne VIC 3004 Telephone: +61 3 9863 8081 Facsimile: +61 3 9863 8083
Revisions Highlighted	The SDS was reviewed due to a formulation change. Various changes have been made through out this document. ...End Of MSDS...